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(71) Applicants (for all designated States except US): HUMBOLDT-UNIVERSITÄT ZU BERLIN [DE/DE]; Unter den Linden 6, 10099 Berlin (DE)

(72) Inventors; and

(75) Inventors/Applicants (only for US): HATAMI, Fariba (IR/US); 2275 Sharon Road, #315 Menlo Park, CA 94025-6745 (US), MASSELINK, William, Ted (US/DE); Kollwitzstrasse 99, 10435 Berlin (DE)

(74) Attorney: THEOBALD, Andreas; Rothkopf & Theobald, Glinkastrasse 30, 10117 Berlin (DE)

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(54) Title: LIGHT-EMITTING SEMICONDUCTOR DEVICES HAVING A VARIABLE EMISSION WAVELENGTH

(57) Abstract: A semiconductor device according to the invention for emitting light when a voltage is applied includes a first semiconductor region (3) whose conductivity is based on charge carriers of a first conductivity type, that is to say for example electrons, a second semiconductor region (5) whose conductivity is based on charge carriers of a second conductivity type, which have a charge opposite to the charge carriers of the first conductivity type, that is to say for example holes, and an active semiconductor region (7A-7C) which is arranged between the first semiconductor region (3) and the second semiconductor region (5) and in which light emission takes place, in which quantum structures (13, 15) of a semiconductor material having a direct band gap are embedded in at least two different intercoupled configurations. In addition associated with the semiconductor device according to the invention is a switching device (20) for directly or indirectly influencing the current flowing through the active semiconductor region (7A-7C) and which is so designed as to switch to and fro at least between a current flow through the active semiconductor region with a current intensity (H1) below a given threshold current intensity and a current flow through the active semiconductor region with a current intensity (H2) above the threshold current intensity.

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